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NOTICE OF ALLOWANCE AND FEE(S) DUE

30827 7590 06/03/2008

MCKENNA LONG & ALDRIDGE LLP
1900 K STREET, NW
WASHINGTON, DC 20006

EXAMINER

DHARIA, PRABODH M

ART UNIT

PAPER NUMBER

2629

DATE MAILED: 06/03/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/668,606

09/24/2003

Hyong-Yerl Park

8734.233.00 US

1510

TITLE OF INVENTION: LIQUID CRYSTAL DISPLAY DEVICE AND METHOD OF DRIVING THE SAME

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1440	\$300	\$0	\$1740	09/03/2008

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

30827 7590 06/03/2008

MCKENNA LONG & ALDRIDGE LLP
1900 K STREET, NW
WASHINGTON, DC 20006

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/668,606 09/24/2003 Hyong-Yerl Park 8734.233.00 US 1510

TITLE OF INVENTION: LIQUID CRYSTAL DISPLAY DEVICE AND METHOD OF DRIVING THE SAME

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1440	\$300	\$0	\$1740	09/03/2008

EXAMINER	ART UNIT	CLASS-SUBCLASS
DHARIA, PRABODH M	2629	345-087000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,606	09/24/2003	Hyong-Yerl Park	8734.233.00 US	1510
30827	7590	06/03/2008	EXAMINER	
MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW WASHINGTON, DC 20006			DHARIA, PRABODH M	
			ART UNIT	PAPER NUMBER
			2629	
DATE MAILED: 06/03/2008				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 320 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 320 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability

Application No.

10/668,606

Applicant(s)

PARK ET AL.

Examiner

Art Unit

PRABODH M. DHARIA

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 04-21-2008.
2. ☒ The allowed claim(s) is/are 1-4,10,12,13 and 15-18.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date ____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date ____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other ____.

/Prabodh M Dharia/
Primary Examiner, Art Unit 2629

Art Unit: 2629

1. **Status:** Please all the replies and correspondence should be addressed to Examiner's new art unit 2629. Receipt is acknowledged of papers submitted on 04-21-2008 under amendments and request for continued examination (RCE), which have been placed of record in the file. Claims 1-4, 10, 12, 13 and 15-18 are pending in this action. Claims 5-9, 11 and 14 are cancelled.

Response to Amendment

2. The amendment filed 03-19-2008 does not introduce any new matter into the disclosure. The added material is supported by the original disclosure. Applicant has amended independent claims 1 and 12 by adding allowable limitations and cancelling dependent claims 5-9, 11 and 14 to expedite allowance of the instant application.

3. Applicant has amended claims 1 and 12 by adding allowable limitations and cancelling dependent claims 5-9, 11 and 14 to expedite allowance of the instant application. Claims 10 and 17 were allowed on merits in previous office action mailed on 12-20-2007. Applicant's arguments filed on 03-19-2008 are convincing. As argued by applicant in under remarks regarding allowable limitations; for independent Claims 1 and 12, "a plurality of conductive lines formed at an outer side of the image display part and on the first substrate to supply gate driving signals to the gate driving integrated circuits to be supplied to the gate lines; a first control signal line on the gate tape carrier packages, the first control signal line being connected to the conductive lines to supply a first control signal to the gate driving integrated circuits mounted on the gate tape carrier packages so that the gate lines of the image display part may be sequentially driven from the first one to the last one by applying the first control signal to the first one

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through a first signal path having the conductive lines and the first control signal line on the gate tape carrier packages; a second control signal line on the gate tape carrier packages, the second control signal line being connected to the conductive lines to supply a second control signal to the gate driving integrated circuits mounted on the gate tape carrier packages so that the gate lines of the image display part may be sequentially driven from the last one to the first one by applying the second control signal to the last one through a second signal path having the conductive lines and the second control signal line on the gate tape carrier packages; and a first controller to supply the first and second control signals to the first and second control signal lines” For Claims 1-4, 12, 13, 15, 16 and 18 and “a first control signal line formed together with the conductive lines for supplying a first control signal to the gate driving integrated circuits so that the gate lines of the image display part may be sequentially driven from the first one to the last one; a second control signal line formed together with the conductive lines for supplying a second control signal to the gate driving integrated circuits so that the gate lines of the image display part may be sequentially driven from the last one to the first one; and a first controller for supplying the first and second control signals to the first and second control signal lines and a shorting line mounted at an edge of the first substrate to electrically connect an end of the first control signal line and an end of the second control signal line extended from the last gate driving IC” For Claims 10 and 17 are persuasive; as after further extensive search and consideration, the amended independent claims 1, and 12 do overcome the prior art rejection mailed on 12-20-2007, therefore the prior art rejection is withdrawn; which puts application number 10,668606 is in condition for allowance.

Allowable Subject Matter

4. Claims 1-4, 10, 12, 13 and 15-18 are allowed.

5. The following is an examiner's statement of reasons for allowance:

6. Applicant has amended claims 1 and 12 by adding allowable limitations and cancelling dependent claims 5-9, 11 and 14 to expedite allowance of the instant application. Applicant's arguments filed on 03-19-2008 are convincing. As argued by applicant in remarks under claim rejection page 6, last two paragraphs, page 7, and page 8, paragraphs 1 and 2, prior art of Lim (US 2002/0039089 A1), Murade (US 2001/0022572 A1) and Aoki (US 5,966,115) with all of the other prior art cited on 892's 1449's, searched in NPL and searched in PGPUB, fails to recite or disclose the amended independent claims, all the other limitations of independent claims in combination with uniquely distinct features represented by underlined bold claim limitations recited below;

For Claims 1-4, 12, 13, 15, 16 and 18

a plurality of conductive lines formed at an outer side of the image display part and on the first substrate to supply gate driving signals to the gate driving integrated circuits to be supplied to the gate lines; a first control signal line on the gate tape carrier packages, the first control signal line being connected to the conductive lines to supply a first control signal to the gate driving integrated circuits mounted on the gate tape carrier packages so that the gate lines of the image display part may be sequentially driven from the first one to the last one by applying the first control signal to the first one through a first signal path having the conductive lines and the first control signal line on the gate tape carrier

packages; a second control signal line on the gate tape carrier packages, the second control signal line being connected to the conductive lines to supply a second control signal to the gate driving integrated circuits mounted on the gate tape carrier packages so that the gate lines of the image display part may be sequentially driven from the last one to the first one by applying the second control signal to the last one through a second signal path having the conductive lines and the second control signal line on the gate tape carrier packages; and a first controller to supply the first and second control signals to the first and second control signal lines.

For Claim 10 and 17

a first control signal line formed together with the conductive lines for supplying a first control signal to the gate driving integrated circuits so that the gate lines of the image display part may be sequentially driven from the first one to the last one; a second control signal line formed together with the conductive lines for supplying a second control signal to the gate driving integrated circuits so that the gate lines of the image display part may be sequentially driven from the last one to the first one; and a first controller for supplying the first and second control signals to the first and second control signal lines and a shorting line mounted at an edge of the first substrate to electrically connect an end of the first control signal line and an end of the second control signal line extended from the last gate driving IC.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prabodh M Dharia whose telephone number is 571-272-7668.

The examiner can normally be reached on M-F 8AM to 5PM.

8. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

/Prabodh M Dharia/

Primary Examiner

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02-20-2008